

CLAIMS

1. Spray-drying device, comprising a vertical drying chamber which comprises:
  - 5 - a material feed for supplying material which is to be spray-dried,
  - an atomization means for atomizing the material which is to be spray-dried,
  - a drying-gas feed for supplying drying gas,
  - 10 - a drying-gas discharge for discharging drying gas,
  - a material discharge for discharging spray-dried material,
  - filter means for separating entrained fine particles out of discharged drying gas, and
  - 15 - fine-particle removal means for removing fine particles which have been deposited on the filter means from the filter means,characterized in that the spray-drying device also comprises fine-particle collection means for collecting the fine particles which have been removed from the filter means by the fine-particle removal means, the collected fine particles and the spray-dried material being separate products.
- 25 2. Spray-drying device according to claim 1, characterized in that the fine-particle collection means comprise at least one separate compartment of the drying chamber, the filter means and the fine-particle removal means being arranged in the at least one compartment, and the drying-gas discharge being in open communication with the drying chamber via the at least one compartment.
- 30 3. Spray-drying device according to claim 2, characterized in that at least one compartment is in direct communication with the drying chamber by means of at least one opening in a wall thereof.
- 35 4. Spray-drying device according to claim 3, characterized in that the at least one compartment is in communication with

the drying chamber by means of a group of at least two openings in a wall thereof, which openings are distributed evenly over the periphery of the drying chamber.

- 5     5.     Spray-drying device according to claim 4, characterized in that the at least one compartment is in communication with the drying chamber by means of at least two groups of openings arranged at different heights in the drying chamber.
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6.     Spray-drying device according to one or more of the preceding claims, characterized in that the filter means comprise a bag filter or a filter hose.
- 15     7.     Spray-drying device according to one or more of the preceding claims, characterized in that the fine-particle removal means comprise means for reversing the flow of drying gas.
- 20     8.     Spray-drying device according to one or more of the preceding claims, characterized in that the fine-particle collection means also comprise fine-particle treatment means.
- 25     9.     Spray-drying device according to one or more of the preceding claims, characterized in that the fine-particle collection means also comprise fine-particle conveyor means.
- 30     10.    Spray-drying device according to claim 9, characterized in that the fine-particle conveyor means comprise a perforated plate through which gas can be blown.
- 35     11.    Spray-drying device according to claim 9 or 10, characterized in that the fine-particle conveyor means comprise a discharge opening leading to the drying chamber.